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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,046	07/10/2001	Akio Uenishi	50090-308	6444

7590

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EXAMINER

VU, QUANG D

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,046

Applicant(s)

UENISHI, AKIO

Examiner

Quang D Vu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 04/14/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 2-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,194,775 to Usami.

Regarding claim 2, Usami (figure 3) teaches a semiconductor device, comprising:

a semiconductor substrate (1);

a first insulating film (2) formed on the semiconductor substrate;

a polysilicon resistor film (6, 7) formed on the first insulating film (2);

a second insulating film (9) formed on the resistor film (6, 7),

It is inherent that the insulating film (13) is a high heat conductor film consisting of a highly heat-conducting material (silicon oxide) formed on the second insulating film (9).

Usami further discloses a pair of terminal wirings (11, 12) formed on the second insulating film (9) and connected to the resistor film (6, 7), wherein a thickness of the high heat conductor film (13) is thicker than a thickness of the resistor film (6, 7).

Art Unit: 2811

Regarding claim 3, Usami teaches the thickness of the high heat conductor film (13) is twice the thickness of the resistor film (6, 7) or thicker.

Regarding claim 5, Usami teaches the high heat conductor film (13) is united with one of the terminal wirings (11, 12).

Regarding claim 6, Usami (figure 3) teaches a semiconductor device, comprising:

a semiconductor substrate (1);

a first insulating film (2) formed on the semiconductor substrate (1);

a polysilicon resistor film (6, 7) formed on the first insulating film (2);

a second insulating film (9) formed on the resistor film (6, 7),

It is inherent that the insulating film (13) is a high heat conductor film consisting of a highly heat-conducting material (silicon oxide) formed on the second insulating film (9).

Usami further discloses a pair of terminal wirings (11, 12) formed on the second insulating film (9) and connected to the resistor film (6, 7), wherein a thickness of the second insulating film (9) located above the resistor film is thinner than a thickness of the resistor film (6, 7), and a thickness of the high heat conductor film (13) is thicker than a thickness of the resistor film (6, 7).

Allowable Subject Matter

3. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2811

4. The following is a statement of reasons for the indication of allowable subject matter:

The most closely related art, US Patent No. 6,194,775 to Usami. Usami does not anticipate or render the claimed invention such as a width of the high heat conductor film is wider than a width of the resistor film.

Response to Arguments

Applicant's arguments filed 04/14/03 have been fully considered but they are not persuasive.

It is argued, in page 2 of the remarks, that Usami does not teach or suggest the high heat conductor film consisting of a highly heat conducting material formed on the second insulating film. This argument is not convincing because Usami teaches the insulating film (13) is a high heat conductor film consisting of a highly heat-conducting material (silicon oxide) formed on the second insulating film (9). Additionally, the silicon oxide is good heat dissipation as taught by US Patent No. 6,411,155 to Pezzani (column 2, lines 37-43).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2811

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D Vu whose telephone number is 703-305-3826. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 703-308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

qv
June 14, 2003

Steven Lohr
Primary Examiner
